

## A/33-1 High Temperature, Water-cooled Triaxial Piezoelectric Accelerometer

7pC/g nom. 38gm  
900°C Max surface temp with water flow



The A/33 charge output range of piezoelectric triaxial accelerometers feature ultra-high temperature usage on surfaces up to 900°C. Developed as solutions for Vibration Measurements on exhaust pipes or engine turbo collectors, they have since found uses in many other high temperature test applications.

Mono-axial versions can also be supplied on request, axis selection to suit customer application.

Water flow is via two titanium pipes and it's recommended that the flow rate of 0.5 litre/min is maintained permanently when in use at high temperature. Failure to do so could lead to injury and damage to the unit.

It is recommended at the highest temperatures a constant supply of chilled cooling water should be used.

The A/33-1 consists of 3 mono axial charge accelerometers mounted into an anodized aluminium block. This allows the advantage of single axis repair if required. The A/33-1 has a raised base to provide the end user the option to shape the mounting surface to suit a curved or complex interface.

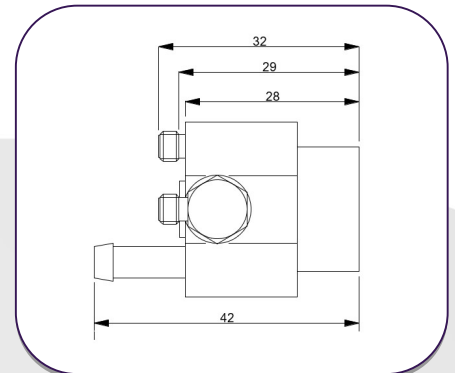
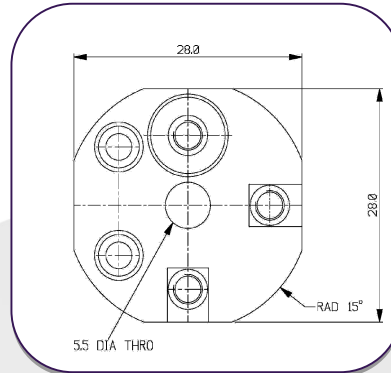
If using multiple A/33-1 units on one test it is also recommended that each unit is operated with its own cooling pump, do not use one pump for multiple A/33-1.

Accessories:  
Silicone tubing  
General purpose 12V pump

**peak** 

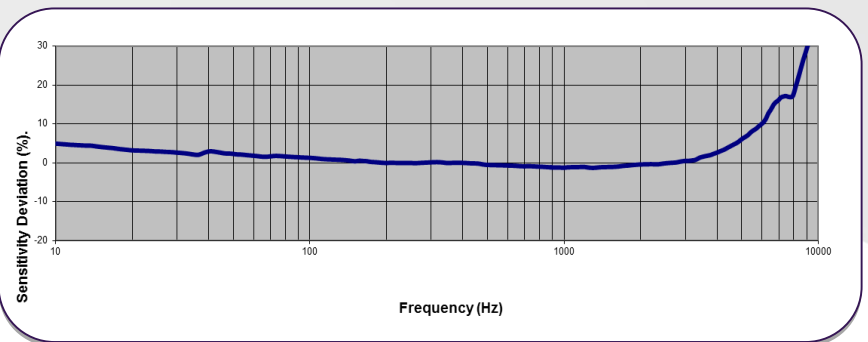
North American Distributor  
t: 616-773-2872  
e: sales@peak-g.com

A/33-1

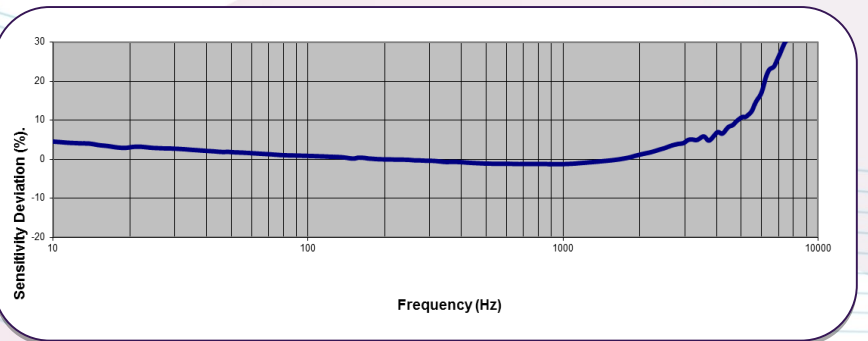
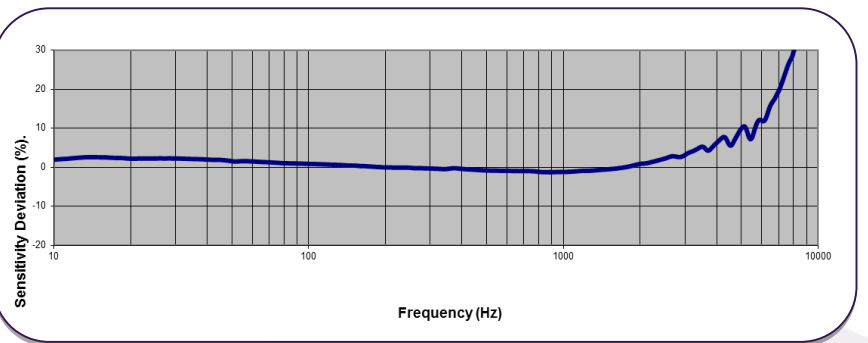


### Typical Frequency Response

X



Y



Please note: For information and reference only. Data should not be used as pass / fail criteria for calibration purposes

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A UK company with UK-based manufacturing, assembly and calibration in-house.

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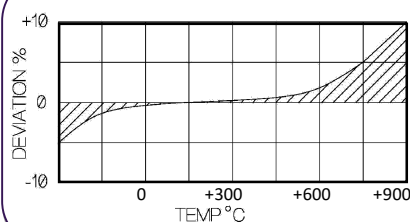


|                                                                           | Metric                                                                                    | Imperial                    |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------|
| Charge sensitivity nom.                                                   | 0.71pC/(m/s <sup>2</sup> )                                                                | 7pC/g                       |
| Resonant Frequency                                                        | ≥15kHz                                                                                    |                             |
| Typical Frequency Response ±5%<br>±10%                                    | 1Hz – 3kHz<br>0.7Hz – 4kHz                                                                |                             |
| Cross Axis error                                                          | ≤5 % max                                                                                  |                             |
| Temperature Range<br>Without water flow<br>With water flow of 0.5 ltr/min | -50/ +220°C<br>+900°C (surface temp)                                                      |                             |
|                                                                           | -58/ +428°F<br>+1652°F (surface temp)                                                     |                             |
| Maximum Continuous g level                                                | 9806m/s <sup>2</sup>                                                                      | 1000g                       |
| Mounting                                                                  | 1 x 5.5mm Ø through hole                                                                  | 1 x 5.5mm Ø through hole    |
| Weight                                                                    | 38gm                                                                                      | 1.34oz                      |
| Case Material                                                             | Fully welded Titanium transducer inserts, bonded into hard anodised aluminium alloy block |                             |
| Size                                                                      | 28mm x 28mm x 42mm                                                                        | 1.102in x 1.102in x 1.269in |
| Connector                                                                 | 3 x Top entry 10-32 UNF Microdot                                                          |                             |
| Base Strain Sensitivity                                                   | ≤0.01g/μ strain                                                                           |                             |

### Options

A/33 – Flat base  
A/33-1 – Raised base for  
customer modification to fit  
curved or odd shape  
mounting surfaces.

### Temperature Response With water flow



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